RESPONSE TO RESTRICTION REQUIREMENT
Serial Number: 10/750,544
Filing Date: December 31, 2003
Title: PROGRAMMABLE VIDEO PROCESSING AND VIDEO STORAGE ARCHITECTURE

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IN THE CLAIMS

1. (Original)   A method comprising:

receiving video into a video display device;

storing, by at least one processor, the video into a memory, upon determining that the video display device is in a storage mode; and

performing enhanced image processing on the video with the at least one processor, upon determining that the video display device is in an image processing mode.

2. (Original)   The method of claim 1, further comprising compressing, by the at least one processor, the video prior to storing the video into the memory, upon determining that the video display device is within the storage mode.

3. (Original)   The method of claim 2, wherein compressing, by the at least one processor, the video comprises performing frame reduction on the video, by a first processor of the at least one processor.

4. (Original)   The method of claim 3, wherein compressing, by the at least one processor, the video comprises scaling, by a second processor of the at least one processor, of the video.

5. (Original)   The method of claim 1, wherein performing enhanced image processing on the video comprises performing a ghost reduction operation.

6. (Original)   The method of claim 1, wherein performing enhanced image processing on the video comprises performing a noise reduction operation.

7. (Original)   The method of claim 1, wherein performing enhanced image processing on the video with the at least one processor comprises performing a first enhanced image processing operation on the video with a first processor of the at least one processor and performing a

second enhanced image processing operation on the video with a second processor of the at least

one processor.

8. (Original)   The method of claim 7, further comprising transmitting output of the first

enhanced image processing operation from the first processor to the second processor through a

logical connection that includes a path through a third processor, wherein the third processor is

not configured to perform a process operation on the output as part of the transmitting of the

output through the logical connection.

9. (Original)   An apparatus comprising:

an input/output interface coupled to a memory; and

a first programmable processor to perform a first enhanced image processing operation on

video if a current mode of the apparatus is an image processing mode, and wherein the first

programmable processor is to store the video into the memory if the current mode of the

apparatus is a storage mode.

10. (Original) The apparatus of claim 9, further comprising a second programmable processor to

perform a second enhanced image processing operation on the video if the current mode of the

apparatus is the image processing mode, and wherein the second processor is to perform a video

compression operation to the video prior to storage of the video into the memory if the current

mode of the apparatus is a storage mode.

11. (Original) The apparatus of claim 10, wherein the video compression operation is selected

from a group consisting of an image scale operation and a frame rate reduction operation.

12. (Original) The apparatus of claim 10, further comprising a third programmable processor to

perform a third enhanced image processing operation on the video if the current mode of the

apparatus is the image processing mode, and wherein the third processor is to perform a noise

reduction operation on the video prior to the video compression operation if the current mode of

the apparatus is the storage mode.

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13. (Original) The apparatus of claim 9, further comprising a host processor to receive control input from a user of a video display device that includes the apparatus, wherein the control input is to cause a change in the current mode, wherein the host processor is to update microcode in the first programmable processor if the control input is to cause a change from the current mode.

14. (Original) An apparatus comprising:

a memory;

a first programmable processor to perform a first enhanced image processing operation on video if a current mode of the apparatus is an image processing mode, and wherein the first programmable processor is to perform a compression operation on the video if the current mode of the apparatus is a storage mode; and

a second programmable processor to receive output from the first enhanced image processing operation through a first logical connection that includes a path through a third programmable processor and to perform a second enhanced image processing operation on the video if the current mode of the apparatus is the image processing mode, and wherein the second programmable processor is to receive output from the compression operation through a second logical connection that includes a path through a fourth programmable processor and to store the video into the memory if the current mode of the apparatus is the storage mode.

15. (Original) The apparatus of claim 14, further comprising a host processor to receive control input from a user of a video display device that includes the apparatus, wherein the control input is to cause a change in the current mode, wherein the host processor is to create the first logical connection if the current mode of the apparatus is the storage mode, the host processor to create the second logical connection if the current mode of the apparatus is an image processing mode.

16. (Original) The apparatus of claim 15, wherein the host processor is to update microcode in the first programmable processor and the second programmable processor if the control input is to cause a change from the current mode.

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17. (Original) The apparatus of claim 16, wherein the control input to cause the current mode to be the storage mode is a pause operation of display of the video on a display of the video display device.

18. (Original) The apparatus of claim 16, wherein the control input to cause the current mode to be the storage mode is a rewind operation of display of the video on a display of the video display device.

19. - 22. (Canceled)

23. (Original) A machine-readable medium that provides instructions, which when executed by a machine, cause said machine to perform operations comprising:

receiving video into a video display device;

storing, by at least one processor, the video into a memory, upon determining that the video display device is in a storage mode; and

performing enhanced image processing on the video with the at least one processor, upon determining that the video display device is in an image processing mode.

24. (Original) The machine-readable medium of claim 23, further comprising compressing, by the at least one processor, the video prior to storing the video into the memory, upon determining that the video display device is within the storage mode.

25. (Original) The machine-readable medium of claim 24, wherein compressing, by the at least one processor, the video comprises performing frame reduction on the video, by a first processor of the at least one processor.

26. (Original) The machine-readable medium of claim 25, wherein compressing, by the at least one processor, the video comprises scaling, by a second processor of the at least one processor, of the video.

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27. (Original) The machine-readable medium of claim 23, wherein performing enhanced image processing on the video comprises performing a ghost reduction operation.

28. (Original) The machine-readable medium of claim 23, wherein performing enhanced image processing on the video comprises performing a noise reduction operation.

29. (Original) The machine-readable medium of claim 23, wherein performing enhanced image processing on the video with the at least one processor comprises performing a first enhanced image processing operation on the video with a first processor of the at least one processor and performing a second enhanced image processing operation on the video with a second processor of the at least one processor.

30. (Original) The machine-readable medium of claim 29, further comprising transmitting output of the first enhanced image processing operation from the first processor to the second processor through a logical connection that includes a path through a third processor, wherein the third processor is not configured to perform a process operation on the output as part of the transmitting of the output through the logical connection.